

Education

Ph.D., Computer Science, University of Southern Denmark, 2002

M.S., Computer Systems Engineering, University of Southern Denmark, 1998

Academic Positions

Associate Professor, Department of Mathematics and Computer Science, University of Southern Denmark, 2007-present

Professor II, Department of Informatics, University of Bergen, 2006-2009

Assistant Professor, Department of Mathematics and Computer Science, University of Southern Denmark, 2003-2006

Post Doc, Department of Computer Science, University of Copenhagen, 2003

Post Doc, Department of Mathematics and Computer Science, University of Southern Denmark, 2002

Publications

Relaxing the Irrevocability Requirement for Online Graph Algorithms

Boyar, J., Favrhøldt, L. M., Kotrbčík, M. & Larsen, K. S., Jul 2022, In: *Algorithmica*. 84, 7, p. 1916-1951

Online unit profit knapsack with untrusted predictions

Boyar, J., Favrhøldt, L. M. & Larsen, K. S., 1. Jun 2022, *18th Scandinavian Symposium and Workshops on Algorithm Theory, SWAT 2022*. Czumaj, A. & Xin, Q. (eds.). Schloss Dagstuhl- Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, 20. (Leibniz International Proceedings in Informatics, LIPIcs, Vol. 227).

Online Bin Covering with Advice

Boyar, J., Favrhøldt, L. M., Kamali, S. & Larsen, K. S., Mar 2021, In: *Algorithmica*. 83, 3, p. 795-821

Relative Worst-Order Analysis: A Survey

Boyar, J., Favrhøldt, L. M. & Larsen, K. S., Jan 2021, In: *ACM Computing Surveys*. 54, 1, 21 p., 8.

Online bin covering with advice

Boyar, J., Favrhøldt, L. M., Kamali, S. & Larsen, K. S., 12. Jul 2019, *Algorithms and Data Structures: 16th International Symposium, WADS 2019, Proceedings*. Friggstad, Z., Sack, J-R. & Salavatipour, M. R. (eds.). Springer, p. 225-238 (Lecture Notes in Computer Science, Vol. 11646).

Online Dominating Set

Boyar, J., Eidenbenz, S. J., Favrhøldt, L. M., Kotrbčík, M. & Larsen, K. S., May 2019, In: *Algorithmica*. 81, 5, p. 1938-1964 27 p.

Weighted online problems with advice

Boyar, J., Favrhøldt, L. M., Kudahl, C. & Mikkelsen, J. W., Aug 2018, In: *Theory of Computing Systems*. 62, 6, p. 1443-1469

Batch Coloring of Graphs

Boyar, J., Epstein, L., Favrhøldt, L. M., Larsen, K. S. & Levin, A., 2018, In: *Algorithmica*. 80, 11, p. 3293-3315

Online edge coloring of paths and trees with a fixed number of colors

Favrhøldt, L. M. & Mikkelsen, J. W., 2018, In: *Acta Informatica*. 55, p. 57-80

Online-bounded analysis

Boyar, J., Epstein, L., Favrhøldt, L. M., Larsen, K. S. & Levin, A., 2018, In: *Journal of Scheduling*. 21, 4, p. 429-441

Relative worst-order analysis: A survey

Boyar, J., Favrhøldt, L. M. & Larsen, K. S., 2018, *Adventures Between Lower Bounds and Higher Altitudes: Essays Dedicated to Juraj Hromkovič on the Occasion of His 60th Birthday*. Böckenhauer, H-J., Komm, D. & Unger, W. (eds.). 1.

ed. Springer, p. 216-230 (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Vol. 11011 LNCS).

Batch Coloring of Graphs

Boyar, J., Epstein, L., Favrhøldt, L. M., Larsen, K. S. & Levin, A., 2017, *Approximation and Online Algorithms: 14th International Workshop on Approximation and Online Algorithms, WAOA 2016*. Mastrolilli, M. & Jansen, K. (eds.). Springer, p. 52-64 (Lecture Notes in Computer Science, Vol. 10138).

Online Algorithms with Advice: A Survey

Boyar, J., Favrhøldt, L. M., Kudahl, C., Larsen, K. S. & Mikkelsen, J. W., 2017, In: *ACM Computing Surveys*. 50, 2, 34 p., 19.

Relaxing the Irrevocability Requirement for Online Graph Algorithms

Boyar, J., Favrhøldt, L. M., Kotrbčik, M. & Larsen, K. S., 2017, *Algorithms and Data Structures: Proceedings of the 15th International Symposium on Algorithms and Data Structures*. Ellen, F., Kolokolova, A. & Sack, J-R. (eds.). Springer, p. 217-228 (Lecture Notes in Computer Science, Vol. 10389).

The Advice Complexity of a Class of Hard Online Problems

Boyar, J., Favrhøldt, L. M., Kudahl, C. & Mikkelsen, J. W., 2017, In: *Theory of Computing Systems*. 61, 4, p. 1128-1177

Online Algorithms with Advice: A Survey

Boyar, J., Favrhøldt, L. M., Kudahl, C., Larsen, K. S. & Mikkelsen, J. W., 2016, In: *S I G A C T News*. 47, 3, p. 93-129

Online Bounded Analysis

Boyar, J., Epstein, L., Favrhøldt, L. M., Larsen, K. S. & Levin, A., 2016, *Computer Science – Theory and Applications: 11th International Computer Science Symposium in Russia, CSR 2016, St. Petersburg, Russia, June 9-13, 2016, Proceedings*. Kulikov, A. S. & Woeginger, G. J. (eds.). Springer, p. 131-145 (Lecture Notes in Computer Science, Vol. 9691).

Online Dominating Set

Boyar, J., Eidenbenz, S. J., Favrhøldt, L. M., Kotrbčik, M. & Larsen, K. S., 2016, *15th Scandinavian Symposium and Workshops on Algorithm Theory, SWAT 2016*. Pagh, R. (ed.). Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, p. 1-15 21. (Leibniz International Proceedings in Informatics, Vol. 53).

Weighted Online Problems with Advice

Boyar, J., Favrhøldt, L. M., Kudahl, C. & Mikkelsen, J. W., 2016, *Combinatorial Algorithms : 27th International Workshop, IWCOA 2016*. Mäkinen, V., Puglisi, S. J. & Salmela, L. (eds.). Springer, p. 179-190 (Lecture Notes in Computer Science, Vol. 9843).

Advice Complexity for a Class of Online Problems

Boyar, J., Favrhøldt, L. M., Kudahl, C. & Mikkelsen, J. W., 2015, *32nd International Symposium on Theoretical Aspects of Computer Science (STACS 2015)*. Mayr, E. W. & Ollinger, N. (eds.). Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, Vol. 30. p. 116-129 (Leibniz International Proceedings in Informatics, Vol. 30).

Online Dual Edge Coloring of Paths and Trees

Favrhøldt, L. M. & Mikkelsen, J. W., 2015, *Approximation and Online Algorithms: 12th International Workshop, WAOA 2014, Wrocław, Poland, September 11-12, 2014, Revised Selected Papers*. Bampis, E. & Svensson, O. (eds.). Springer, p. 181-192 (Lecture Notes in Computer Science, Vol. 8952).

Online Multi-Coloring with Advice

Christ, M. G., Favrhøldt, L. M. & Larsen, K. S., 2015, *Approximation and Online Algorithms: 12th International Workshop, WAOA 2014, Wrocław, Poland, September 11-12, 2014, Revised Selected Papers*. Bampis, E. & Svensson, O. (eds.). Springer, p. 83-94 (Lecture Notes in Computer Science, Vol. 8952).

Online Multi-Coloring with Advice

Christ, M. G., Favrhøldt, L. M. & Larsen, K. S., 2015, In: *Theoretical Computer Science*. 596, p. 79-91

Online Bin Covering: Expectations vs. Guarantees

Christ, M. G., Favrhøldt, L. M. & Larsen, K. S., 2014, In: Theoretical Computer Science. 556, p. 71-84

Online Bin Covering: Expectations vs. Guarantees

Christ, M. G., Favrhøldt, L. M. & Larsen, K. S., 2013, *Combinatorial Optimization and Applications: 7th International Conference, COCOA 2013, Chengdu, China, December 12-14, 2013, Proceedings*. Widmayer, P., Xu, Y. & Zhu, B. (eds.). Springer, p. 226-237 12 p. (Lecture Notes in Computer Science, Vol. 8287).

Online Multi-Coloring on the Path Revisited

Christ, M. G., Favrhøldt, L. M. & Larsen, K. S., 2013, In: Acta Informatica. 50, 5/6, p. 343-357

A new variable-sized bin packing problem

Boyar, J. & Favrhøldt, L. M., 2012, In: Journal of Scheduling. 15, 3, p. 273-287

CATCHprofiles: Clustering and Alignment Tool for ChIP Profiles

G. G. Nielsen, F., Galschiøt Markus, K., Møllegaard Friberg, R., Favrhøldt, L. M., G. Stunnenberg, H. & Huynen, M., 2012, In: PLOS ONE. 7, 1, p. e28272 8 p.

Comparing Online Algorithms for Bin Packing Problems

Epstein, L., Favrhøldt, L. M. & Kohrt, J. S., 2012, In: Journal of Scheduling. 15, 1, p. 13-21 9 p.

Graph Edge Coloring: Vizing's Theorem and Goldberg's Conjecture

Stiebitz, M., Scheide, D., Toft, B. & Favrhøldt, L. M., 2012, New York: Wiley. 335 p.

Online Variable-Sized Bin Packing with Conflicts

Epstein, L., Favrhøldt, L. M. & Levin, A., 2011, In: Discrete Optimization. 8, 2, p. 333-343 11 p.

Scheduling Jobs on Grid Processors

Boyar, J. & Favrhøldt, L. M., 1. Jan 2010, In: Algorithmica. 57, 4, p. 819-847 29 p.

Comparing First-Fit and Next-Fit for online edge coloring

Ehmsen, M. R., Favrhøldt, L. M., Kohrt, J. S. & Mihai, R., 2010, In: Theoretical Computer Science. 411, 16-18, p. 1734 - 1741

Comparing First-Fit and Next-Fit for Online Edge Coloring

Ehmsen, M. R., Favrhøldt, L. M., Kohrt, J. S. & Mihai, R., 2009, *Algorithms and Computation*. Hong, S-H., Nagamochi, H. & Fukunaga, T. (eds.). Springer, Vol. 5369. p. 89-99 11 p.

The relative worst order ratio applied to paging

Boyar, J., Favrhøldt, L. M. & Larsen, K. S., 1. Aug 2007, In: Journal of Computer and System Sciences. 73, 5, p. 818-843 26 p.

The Relative Worst Order Ratio for On-Line Algorithms

Boyar, J. & Favrhøldt, L. M., 2007, In: ACM Transactions on Algorithms. 3, 2, 24 p.

Scheduling jobs on Grid processors

Boyar, J. & Favrhøldt, L. M., 2006, *Algorithm Theory-SWAT 2006*. Arge, L. & Freivalds, R. (eds.). p. 17-28 12 p. (Lecture Notes in Computer Science, Vol. 4059).

Separating Online Scheduling Algorithms with the Relative Worst Order Ratio

Epstein, L., Favrhøldt, L. M. & Kohrt, J. S., 2006, In: Journal of Combinatorial Optimization. 12, 4, p. 362-385

The Maximum Resource Bin Packing Problem

Boyar, J., Epstein, L., Favrhøldt, L. M., Kohrt, J. S., Larsen, K. S., Pedersen, M. M. & Wøhlk, S., 2006, In: *Theoretical Computer Science*. 362, 1-3, p. 127-139

On Paging with Locality of Reference

Albers, S., Favrhøldt, L. M. & Giel, O., 2005, In: *Journal of Computer and System Sciences*. 70, p. 145-175

Optimal Non-Preemptive Semi-Online Scheduling on Two Related Machines

Epstein, L. & Favrhøldt, L. M., 2005, In: *Journal of Algorithms*. 57, p. 49-73

The Maximum Resource Bin Packing Problem

Boyar, J., Epstein, L., Favrhøldt, L. M., Kohrt, J. S., Larsen, K. S., Pedersen, M. M. & Wøhlk, S., 2005, *Fifteenth International Symposium on Fundamentals of Computation Theory*. Liskiewicz, M. & Reischuk, R. (eds.). Springer Science+Business Media, p. 397-408 (Lecture Notes in Computer Science, Vol. 3623).

The Relative Worst Order Ratio Applied to Paging

Boyar, J., Favrhøldt, L. M. & Larsen, K. S., 2005, *Ikke angivet*. Association for Computing Machinery, p. 718-727

Extending the Accommodating Function

Boyar, J., Favrhøldt, L. M., Larsen, K. S. & Nielsen, M. N., 2003, In: *Acta Informatica*. 40, 1, p. 3-35 33 p.

On-Line Edge-Coloring with a Fixed Number of Colors

Favrhøldt, L. M. & Nielsen, M. N., 2003, In: *Algorithmica*. 35, 2, p. 176-191

On-Line Maximizing the Number of Items Packed in Variable-Sized Bins

Epstein, L. & Favrhøldt, L. M., 2003, In: *Acta Cybernetica*. 16, p. 57-66 10 p.

The Relative Worst Order Ratio for On-Line Algorithms

Boyar, J. & Favrhøldt, L. M., 2003, *5th Italian Conference on Algorithms and Complexity (CIAC 2003)*. Petreschi, R. . R., Persiano, G. . R. & Silvestri, R. . R. (eds.). Springer, Vol. 2653. p. 58-69 (Lecture Notes in Computer Science, Vol. 2653).

Tight Bounds on the Competitive Ratio on Accommodating Sequences for the Seat Reservation Problem

Bach, E., Boyar, J., Epstein, L., Favrhøldt, L. M., Jiang, T., Larsen, K. S., Lin, G-H. & van Stee, R., 2003, In: *Journal of Scheduling*. 6, 2, p. 131-147 17 p.

Extending the Accommodating Function

Boyar, J., Favrhøldt, L. M., Larsen, K. S. & Nielsen, M. N., 2002, *Computing and Combinatorics, 8th Annual International Conference, COCOON 2002*. Springer, p. 87-96 (Lecture Notes in Computer Science, Vol. 2387).

Fair versus Unrestricted Bin Packing

Azar, Y., Boyar, J., Favrhøldt, L. M., Larsen, K. S. & Nielsen, M. N., 2002, In: *Algorithmica*. 34, 2, p. 181-196

On Paging with Locality of Reference

Albers, S., Favrhøldt, L. M. & Giel, O., 2002, *ACM Symposium on Theory of Computing*. p. 258-267 10 p.

On-Line Maximizing the Number of Items Packed in Variable-Sized Bins

Epstein, L. & Favrhøldt, L. M., 2002, *Annual International Conference on Computing and Combinatorics*. Springer Science+Business Media, p. 467-476 12 p.

Optimal Non-Preemptive Semi-Online Scheduling to Minimize Makespan on Two Related Machines

Epstein, L. & Favrhøldt, L. M., 2002, *International Symposium on Mathematical Foundations of Computer Science*. Springer Science+Business Media, p. 245-256 12 p.

Optimal Preemptive Semi-Online Scheduling to Minimize Makespan on Two Related Machines

Epstein, L. & Favrholt, L. M., 2002, In: *Operations Research Letters*. 30, 4, p. 269-275

The Competitive Ratio for On-Line Dual Bin Packing with Restricted Input Sequences

Boyar, J., Favrholt, L. M., Larsen, K. S. & Nielsen, M. N., 2001, In: *Nordic Journal of Computing*. 8, 4, p. 463-472 10 p.

Fair versus Unrestricted Bin Packing

Azar, Y., Boyar, J., Favrholt, L. M., Larsen, K. S. & Nielsen, M. N., 2000, *Algorithm Theory - SWAT 2000, 7th Scandinavian Workshop on Algorithm Theory*. p. 200-213 14 p. (Lecture Notes in Computer Science, Vol. 1851).

On-Line Edge-Coloring with a Fixed Number of Colors

Favrholt, L. M. & Nielsen, M. N., 2000, *Foundations of Software Technology and Theoretical Computer Science*. p. 106-116 11 p.